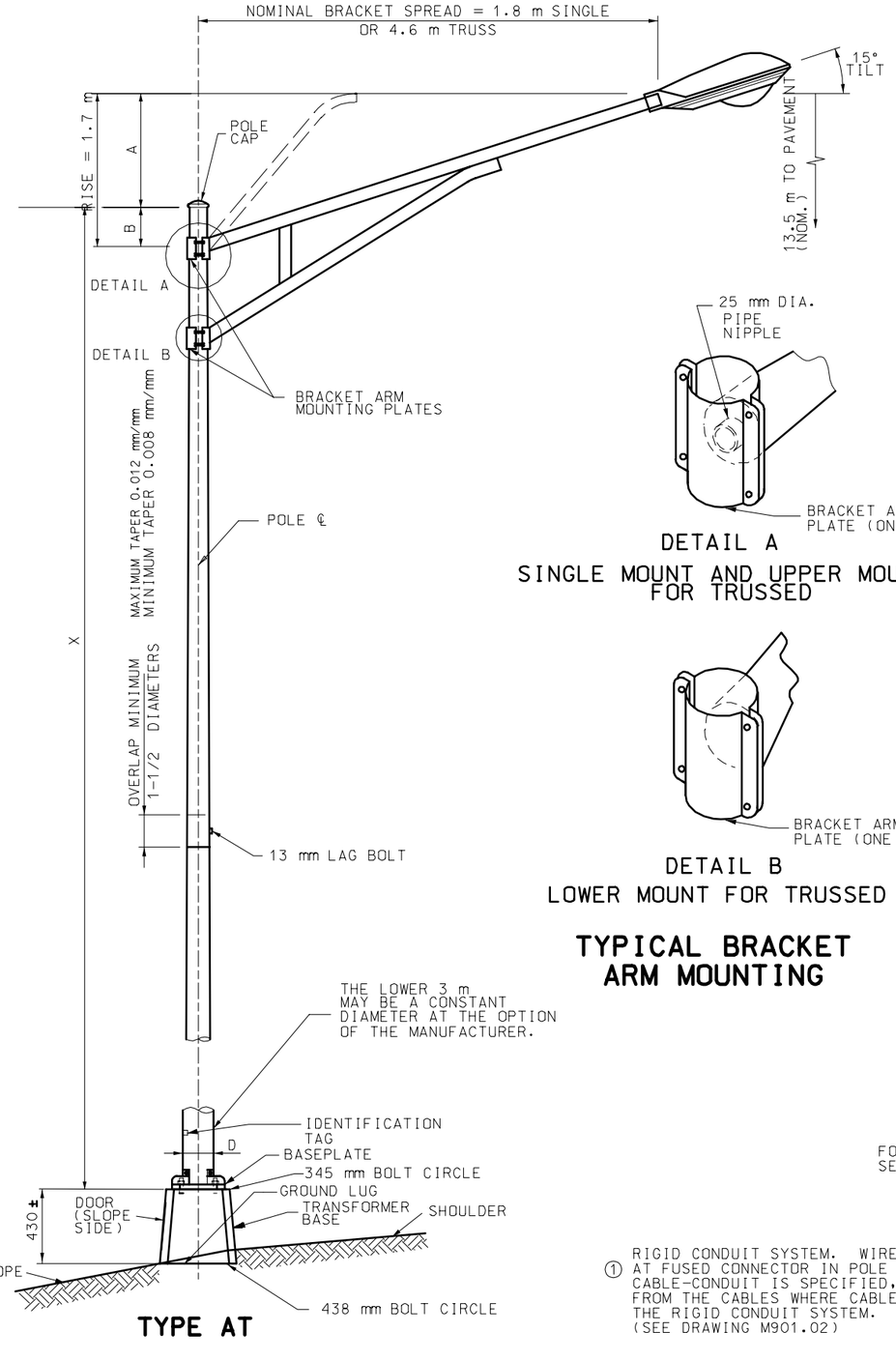
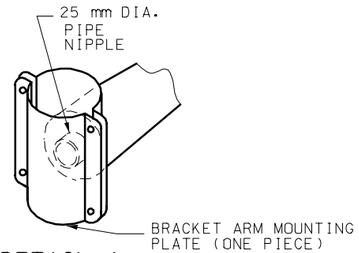
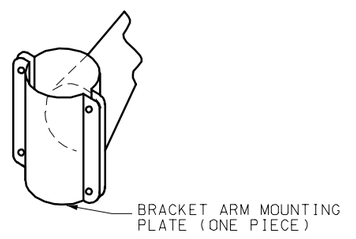


TYPE AT



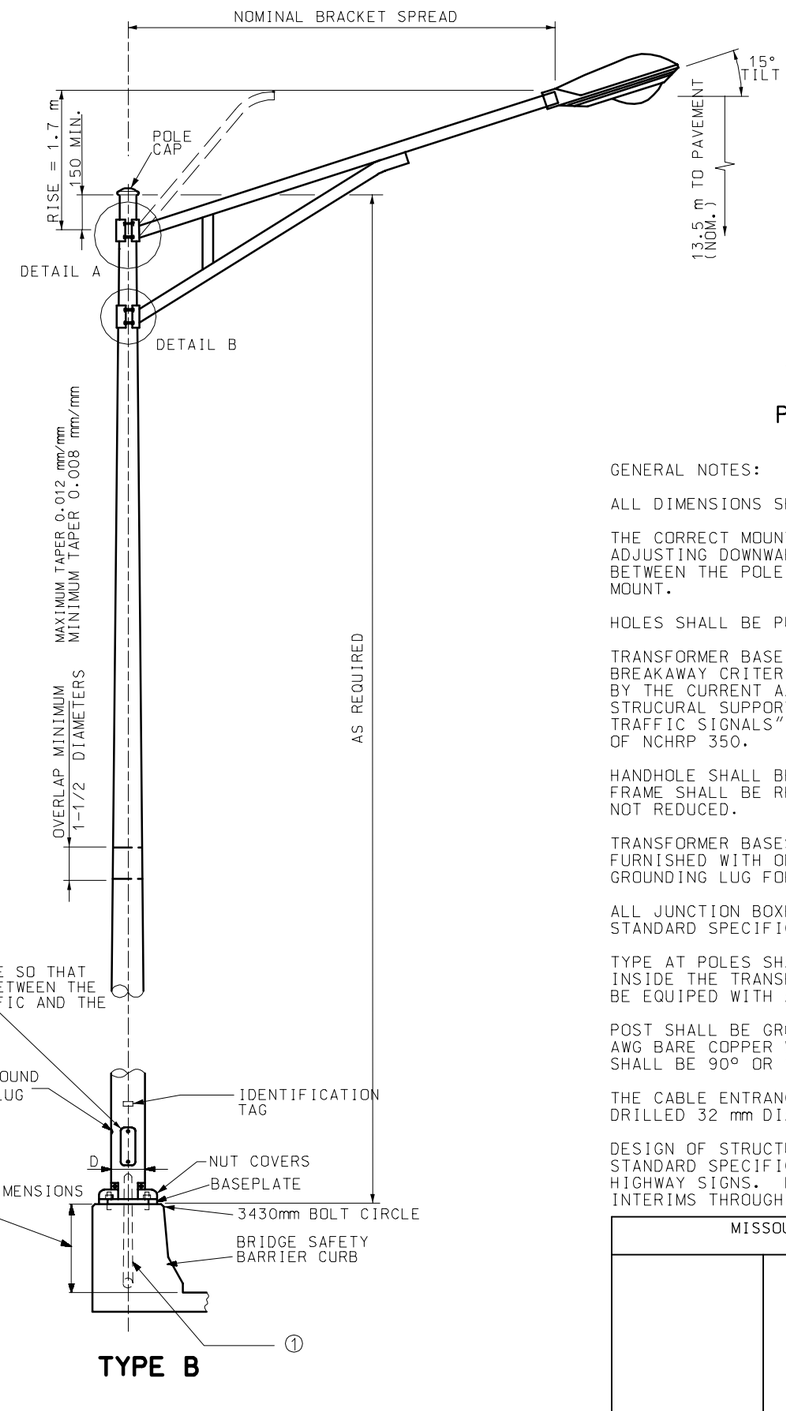
DETAIL A
SINGLE MOUNT AND UPPER MOUNT FOR TRUSSED



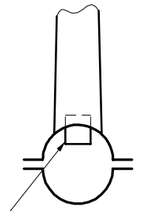
DETAIL B
LOWER MOUNT FOR TRUSSED

TYPICAL BRACKET ARM MOUNTING

① RIGID CONDUIT SYSTEM. WIRES SHALL BE SPLICED AT FUSED CONNECTOR IN POLE BASE. IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT AWAY FROM THE CABLES WHERE CABLE-CONDUIT ENTERS THE RIGID CONDUIT SYSTEM. (SEE DRAWING M901.02)



TYPE B



PLAN VIEW OF DETAIL A

GENERAL NOTES:

ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

THE CORRECT MOUNTING HEIGHT WILL BE OBTAINED BY ADJUSTING DOWNWARD FROM THE 150 mm MIN. CLEARANCE BETWEEN THE POLE CAP AND THE TOP OF THE BRACKET ARM MOUNT.

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS OF NCHRP 350.

HANDHOLE SHALL BE APPROX. 102 mm X 165 mm. HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.

TRANSFORMER BASES FOR 13.5 m MOUNTING HEIGHT SHALL BE FURNISHED WITH ONE DRILLED AND TAPPED HOLE AND GROUNDING LUG FOR GROUNDING EQUIPMENT.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF THE STANDARD SPECIFICATIONS.

TYPE AT POLES SHALL BE EQUIPED WITH THE GROUNDING LUG INSIDE THE TRANSFORMER BASE. TYPE B AND MB POLES SHALL BE EQUIPED WITH A GROUNDING LUG INSIDE THE POLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 32 mm DIA. HOLE.

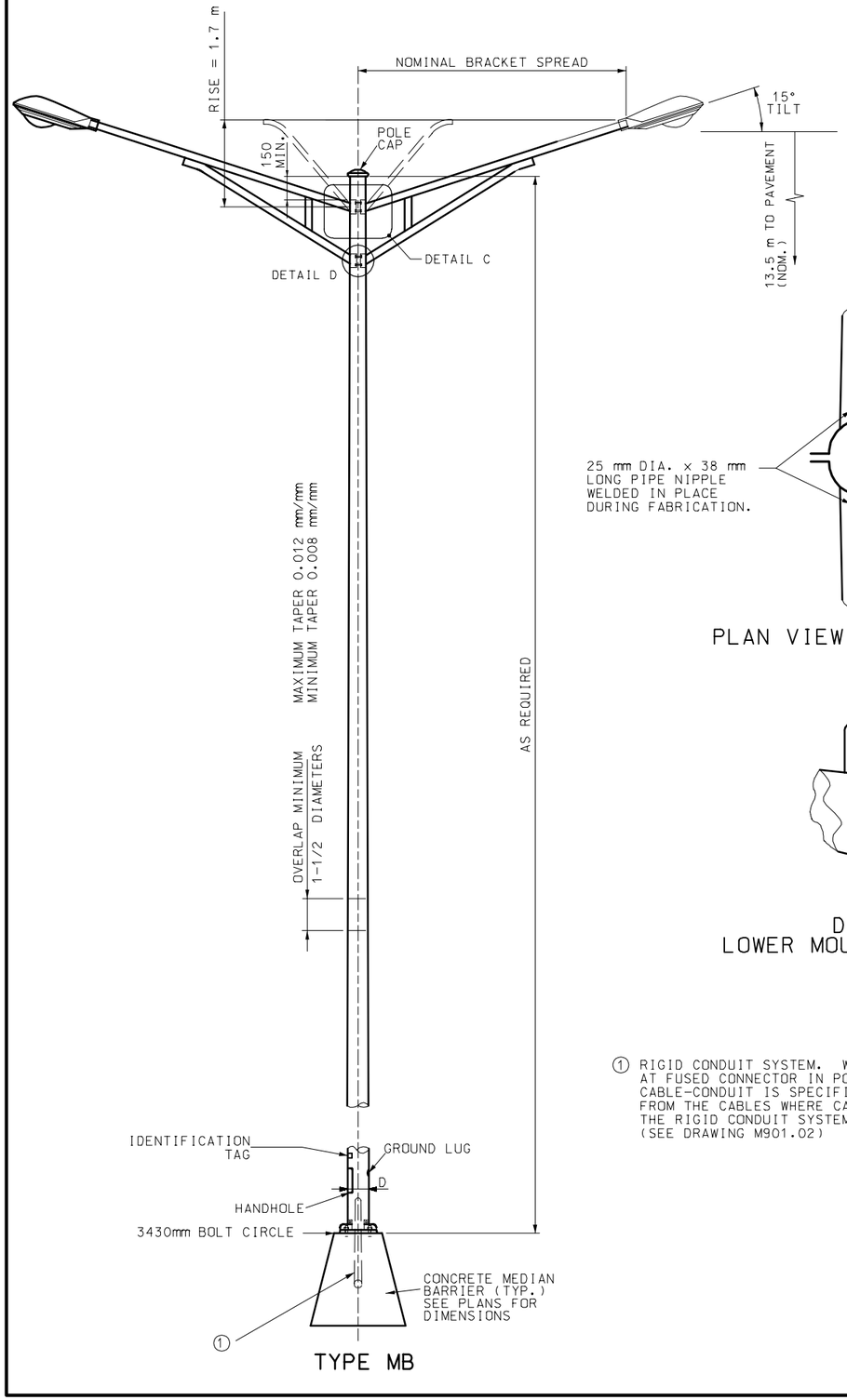
DESIGN OF STRUCTURAL SUPPORTS SHALL COMPLY WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINAIRES AND TRAFFIC SIGNALS 2001 AND INTERIMS THROUGH 2003.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

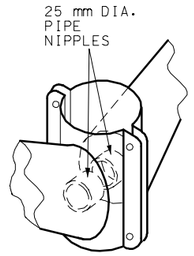
HIGHWAY LIGHTING

POLES, FOUNDATIONS AND APPURTENANCES FOR 13.5 m MOUNTING HEIGHT

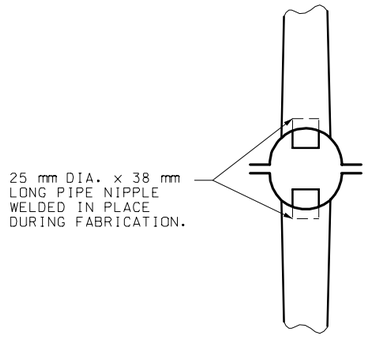
DATE:_____ | EFFECTIVE: 01-01-2005 | **M901.01AC** | 1/6



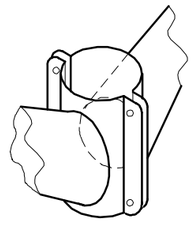
TYPE MB



DETAIL C

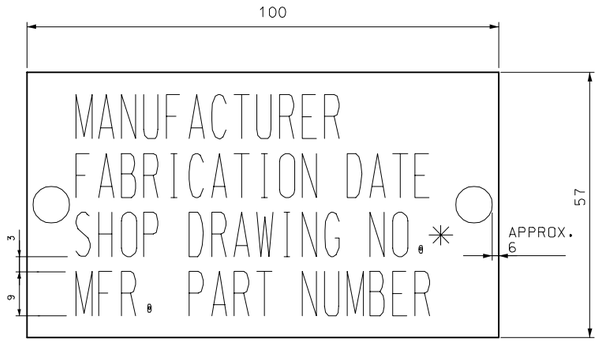


PLAN VIEW OF DETAIL C



DETAIL D
LOWER MOUNT FOR TRUSSED

① RIGID CONDUIT SYSTEM. WIRES SHALL BE SPLICED AT FUSED CONNECTOR IN POLE BASE. IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT AWAY FROM THE CABLES WHERE CABLE-CONDUIT ENTERS THE RIGID CONDUIT SYSTEM. (SEE DRAWING M901.02)



IDENTIFICATION TAG

ID TAG NOTE:

TAG SHALL BE ALUMINUM OR STAINLESS STEEL AND ATTACHED TO POLE USING TWO RIVETS OR STAINLESS STEEL DRIVE SCREWS. ID TAG HOLES SHALL BE DRILLED PRIOR TO GALVANIZING.

*INCLUDING REVISION

GENERAL NOTES:

ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

THE CORRECT MOUNTING HEIGHT WILL BE OBTAINED BY ADJUSTING DOWNWARD FROM THE 150 mm MIN. CLEARANCE BETWEEN THE POLE CAP AND THE TOP OF THE BRACKET ARM MOUNT.

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS OF NCHRP 350.

HANDHOLE SHALL BE APPROX. 102 mm X 165 mm. HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.

TRANSFORMER BASES FOR 13.5 m MOUNTING HEIGHT SHALL BE FURNISHED WITH ONE DRILLED AND TAPPED HOLE AND GROUNDING LUG FOR GROUNDING EQUIPMENT.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF THE STANDARD SPECIFICATIONS.

TYPE AT POLES SHALL BE EQUIPED WITH THE GROUNDING LUG INSIDE THE TRANSFORMER BASE. TYPE B AND MB POLES SHALL BE EQUIPED WITH A GROUNDING LUG INSIDE THE POLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 32 mm DIA. HOLE.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HIGHWAY LIGHTING
POLES, FOUNDATIONS AND APPURTENANCES FOR 13.5 m MOUNTING HEIGHT

DATE:_____ | EFFECTIVE: 01-01-2005 | **M901.01AC** | 2/6

TYPE AT POLE				
BRACKET SPREAD				1.8mm OR 4.6mm
MAX. LUMINAIRE WEIGHT				0.31 sq. m
MAX. PROJECTED AREA				AT-13.5
DESIGN NO.	X (m)	A (mm)	B (mm)	D ✳ (NOMINAL) (mm)
1	15.2	VAR.	150 MIN.	254
2	13.7	VAR.	150 MIN.	254
3	12.2	VAR.	150 MIN.	254
4	10.7	VAR.	150 MIN.	254
5	9.2	VAR.	150 MIN.	254

✳ THE MINIMUM ALTERNATE DIAMETER SHALL BE 254mm FOR A 15.2m POLE, 241mm FOR A 13.7m POLE, 229mm FOR A 12.2m POLE, 216mm FOR A 10.7m POLE AND 203mm FOR A 9.2m POLE

ANSI LAMPS			
FUSE RATING	DESIGNATION HPS	WATTS	INITIAL LUMENS
3A	S55	150	16,000
5A	S50	250	27,500
7A	S51	400	50,000
TYPE III MEDIUM DISTRIBUTION SEMI-CUTOFF UNLESS OTHERWISE SPECIFIED ON PLANS			

TYPE B POLE			
BRACKET SPREAD			1.8mm OR 4.6mm
MAX. LUMINAIRE WEIGHT			27 kg
MAX. PROJECTED AREA			0.31 sq. m
SINGLE BRACKET ARM			
LOCATION	BRACKET SPREAD	D NOM.	ANCHOR BOLT DIA.
BRIDGE SAFETY BARRIER CURB	1.8mm	254mm	317mm
TRUSSED BRACKET ARM			
LOCATION	BRACKET SPREAD	D NOM.	ANCHOR BOLT DIA.
BRIDGE SAFETY BARRIER CURB	4.6mm	254mm	317mm

TYPE MB POLE		
BRACKET SPREAD		1.8mm OR 4.6mm
MAX. LUMINAIRE WEIGHT		27 kg
MAX. PROJECTED AREA		0.31 sq. m
DOUBLE BRACKET ARM		
LOCATION	BRACKET SPREAD	D NOM.
MEDIAN BARRIER CURB	1.8mm	254mm
DOUBLE TRUSSED BRACKET ARM		
LOCATION	BRACKET SPREAD	D NOM.
MEDIAN BARRIER CURB	4.6mm	254mm

GENERAL NOTES:

ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

THE CORRECT MOUNTING HEIGHT WILL BE OBTAINED BY ADJUSTING DOWNWARD FROM THE 150 mm MIN. CLEARANCE BETWEEN THE POLE CAP AND THE TOP OF THE BRACKET ARM MOUNT.

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS OF NCHRP 350.

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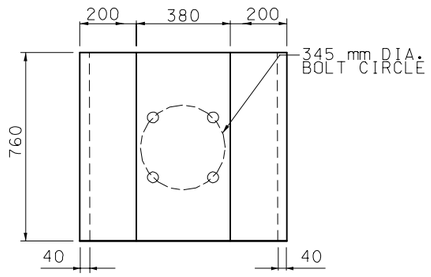
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

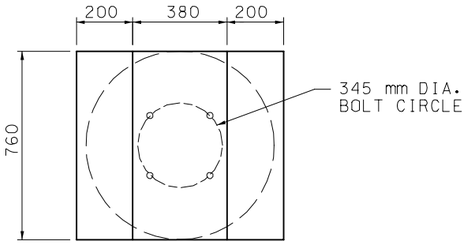
HIGHWAY LIGHTING

POLES, FOUNDATIONS AND APPURTENANCES FOR 13.5 m MOUNTING HEIGHT

DATE:_____ EFFECTIVE: 01-01-2005 **M901.01AC** 3/6



PLAN



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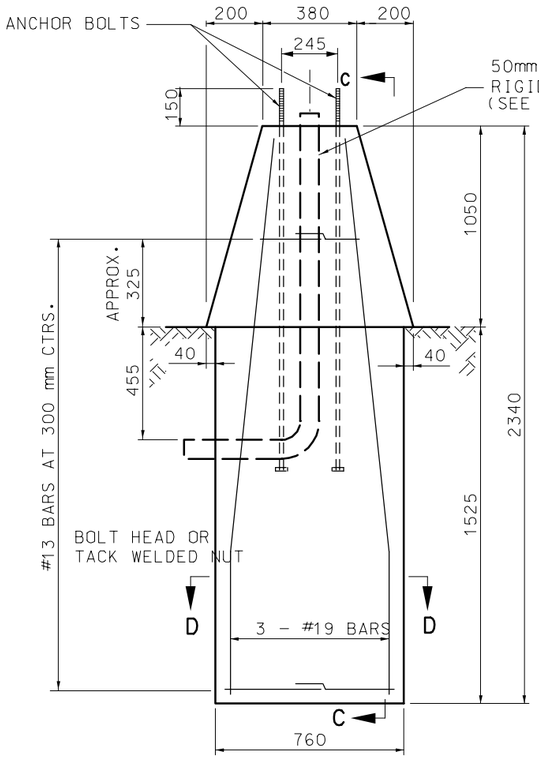
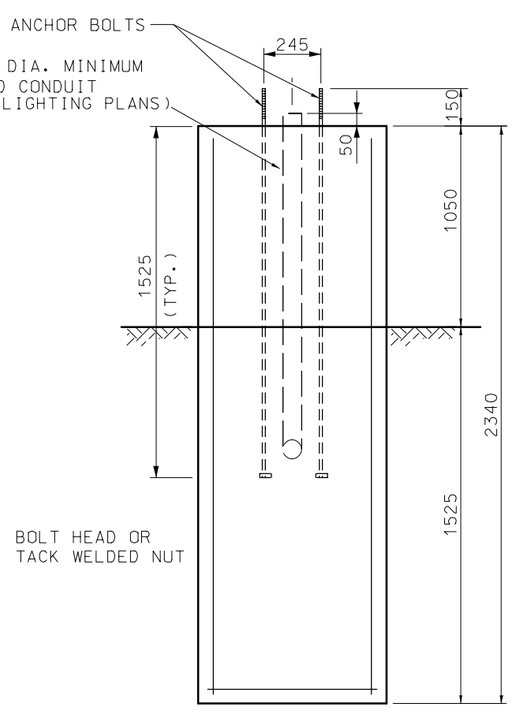
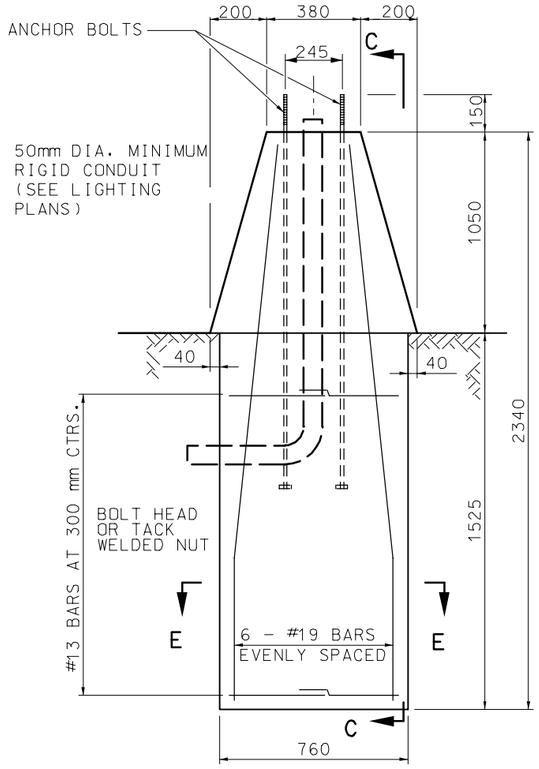


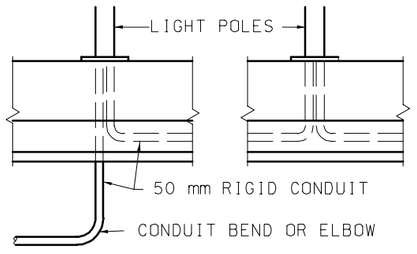
ELEVATION
ALTERNATE 1



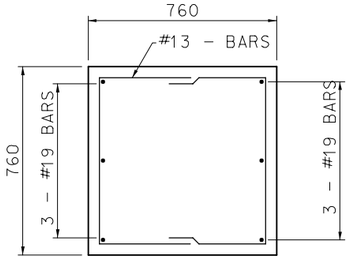
SECTION C-C



ELEVATION
ALTERNATE 2

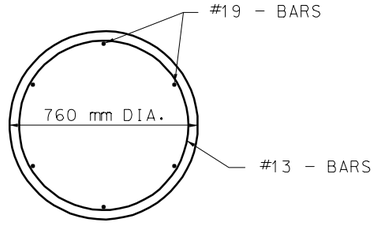


CONDUIT DETAIL FOR
ALTERNATE 1 & 2



SECTION D-D

CONCRETE MEDIAN BARRIER AND FOUNDATION DESIGN FOR TYPE MB LIGHT POLE



SECTION E-E

GENERAL NOTES:

ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

ALL FOUNDATIONS SHALL INCLUDE 4 ANCHOR BOLTS AND NUTS PLACED AS SHOWN.

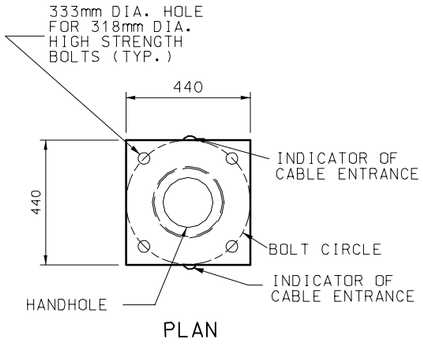
ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 25 mm DIA. HIGH STRENGTH ANCHOR BOLTS.

TOUNGE AND GROOVE REQUIRED ON MEDIAN BARRIER SECTION FOR TYPEMB POLES WHEN ADJACENT MEDIAN BARRIER IS PRECAST, FOR DETAILS, SEE STANDARD PLANS.

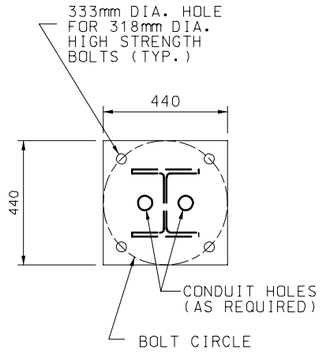
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HIGHWAY LIGHTING
POLES, FOUNDATIONS
AND APPURTENANCES
FOR 13.5 m MOUNTING HEIGHT

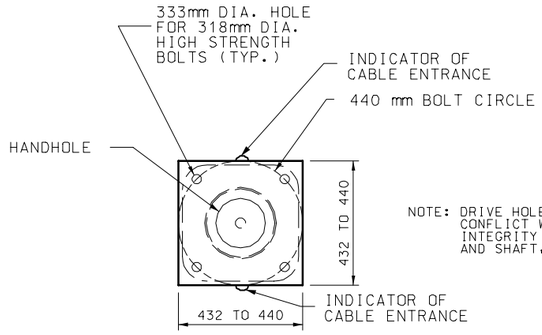
DATE:_____ | EFFECTIVE: 01-01-2005 | **M901.01AC** | 4/6



PLAN



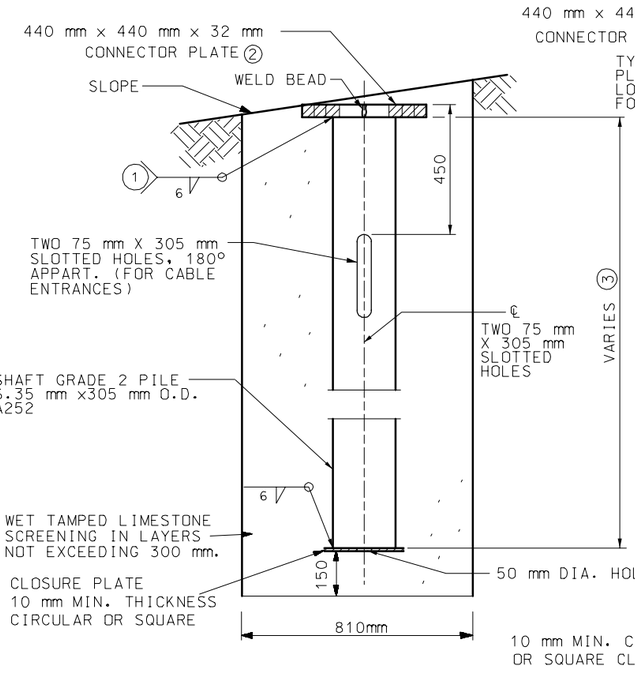
PLAN



NOTE: DRIVE HOLES WILL BE PERMITTED PROVIDED THAT THEY DO NOT CONFLICT WITH OR COMPROMISE THE STRUCTURAL INTEGRITY OF THE PLATE, THE WELD BETWEEN THE PLATE AND SHAFT, OR THE BOLT HOLES.

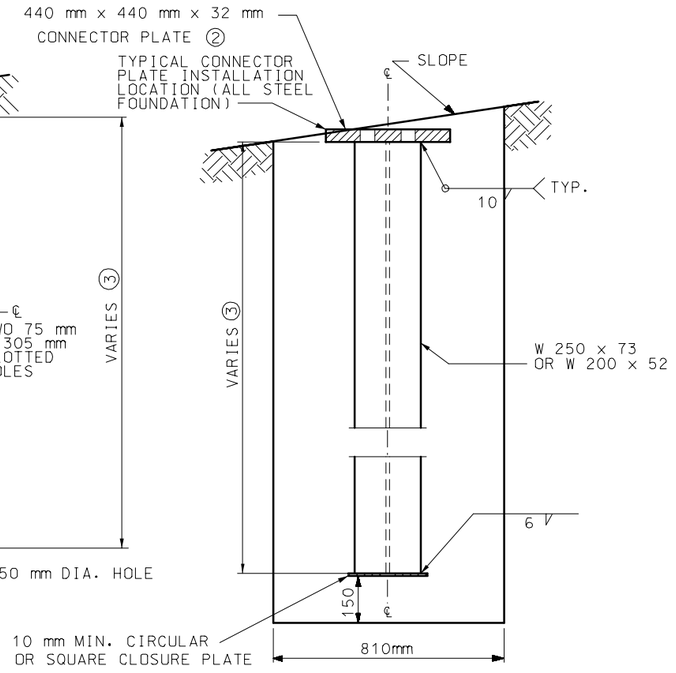
MINIMUM INSTALLING TORQUE EQUALS 8.1 kN-m (± 0.7 kN-m)

PLAN



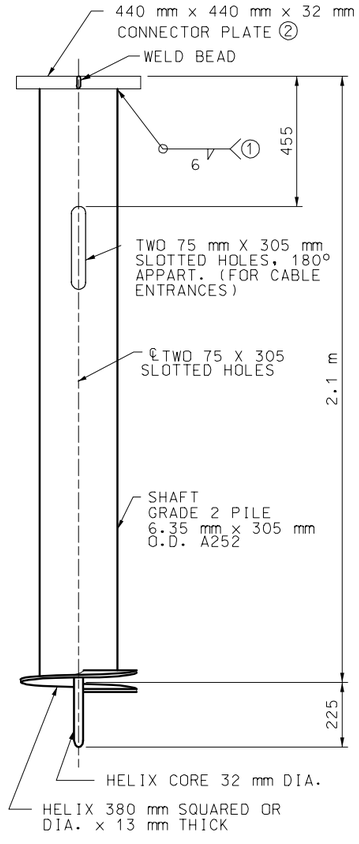
ELEVATION

DETAILS OF CIRCULAR STEEL PILE FOUNDATION



ELEVATION

DETAILS OF STEEL "H" PILE FOUNDATION



ELEVATION

DETAILS OF SCREW ANCHOR FOUNDATION

(1) GRIND WELD AS NECESSARY TO CLEAR BOLT HEAD.

(2) FOUNDATIONS SHALL BE INSTALLED SO THAT CONNECTOR PLATES ARE LEVEL PERPENDICULAR TO THE BRACKET ARM AND SLOPED FOR POLE RAKING PARALLEL TO THE BRACKET ARM.

(3) PILE LENGTHS FOR STEEL PILE FOUNDATIONS:

AT-45 DESIGN NO.	PILE LENGTH
4 & 5	2.4 m
2 & 3	2.7 m
1	3.0 m

GENERAL NOTES:

ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.

ALL BOLT CIRCLES FOR 13.5 m MOUNTING HEIGHT SHALL BE 440 mm.

ALL CONECTOR PLATE AND CLOSURE PLATE THICKNESSES SHOWN ARE MINIMUM DIMENSIONS.

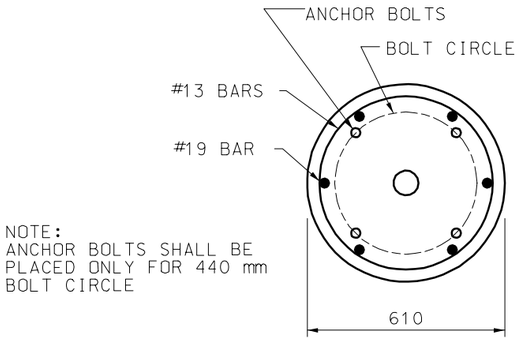
ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 30 mm DIA. HIGH STRENGTH ANCHOR BOLTS.

ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

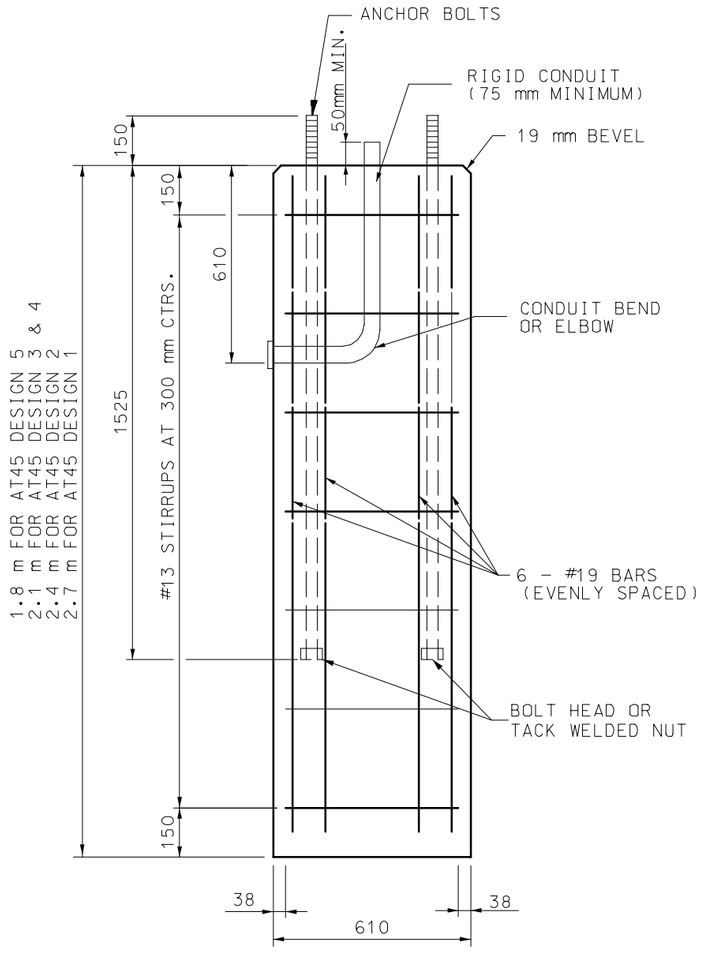
HIGHWAY LIGHTING
POLES, FOUNDATIONS AND APPURTENANCES FOR 13.5 m MOUNTING HEIGHT

DATE:_____ EFFECTIVE: 01-01-2005 **M901.01AC** 5/6



NOTE:
ANCHOR BOLTS SHALL BE PLACED ONLY FOR 440 mm BOLT CIRCLE

PLAN

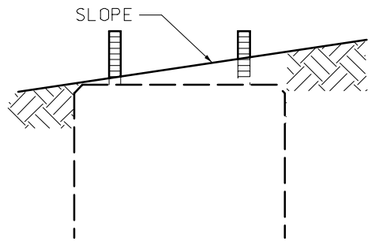


ELEVATION

DETAILS OF CONCRETE FOUNDATION (4)

(4) AT THE OPTION OF THE CONTRACTOR THE CONCRETE FOUNDATIONS MAY BE PRECAST. IF PRECAST, THEY SHALL BE SET IN DRILLED HOLES 915 mm IN DIAMETER AND 150 mm DEEPER THAN THE BOTTOM OF THE CONCRETE FOUNDATION. THE BOTTOM 150 mm OF THE HOLE AND THE REMAINING SPACE AROUND THE FOUNDATION SHALL BE BACKFILLED WITH WET TAMPED LIMESTONE SCREENINGS IN LAYERS NOT EXCEEDING 300 mm.

QUANTITIES		
	CONC.	REINF.
HEIGHT	m^3	kg
1.8	0.53	31
2.1	0.61	37
2.4	0.70	43
2.7	0.79	49



CONCRETE FOUNDATION EMBEDMENT

GENERAL NOTES:

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ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.

ALL BOLT CIRCLES FOR 13.5 m MOUNTING HEIGHT SHALL BE 440 mm.

ALL CONECTOR PLATE AND CLOSURE PLATE THICKNESSES SHOWN ARE MINIMUM DIMENSIONS.

ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 30 mm DIA. HIGH STRENGTH ANCHOR BOLTS.

ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HIGHWAY LIGHTING
POLES, FOUNDATIONS AND APPURTENANCES FOR 13.5 m MOUNTING HEIGHT

DATE:_____ | EFFECTIVE: 01-01-2005 | M901.01AC | 6/6